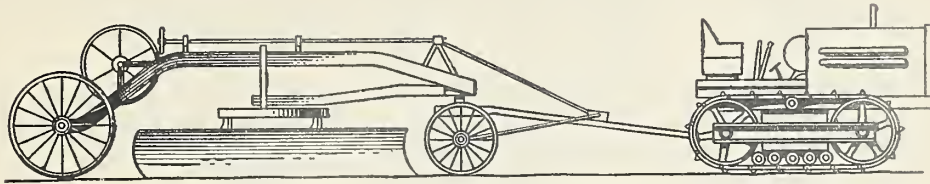


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CONSTRUCTION



HINTS

UNITED STATES DEPARTMENT OF AGRICULTURE, FOREST SERVICE

WASHINGTON, D. C.

Vol. 6

February, 1940.

No. 2.

The Division of Engineering, Washington office, at the request of the CCC Safety Division, has developed a cheap and fairly effective device for attaching to stake trucks that will indicate when a predetermined speed on curves has been exceeded. This device is described and illustrated by Mr. Wiederhold on pages 2 and 3.

On page 4 is shown a film light box table, portable type, designed by Region 2 for the examination and numbering of aerial film. While not of general application, the use of aerial pictures has increased to such an extent that plans for this device are included herein with the idea that it may be of value to some of the field offices. Region 2 reports that it is very satisfactory and has been quite helpful in its work.

The hand reel, shown on page 5, for winding rope or cable in connection with lake sounding and bottom sampling projects is the design suggested and submitted by Mr. I. R. Farrell, Project Superintendent, Camp Paradise, S-127, Michigan State CCC.

Mr. T. E. Matheson, Towerman, Chippewa National Forest has designed a convenient lever type door handle and lock for lookout towers. A sketch of this device is shown on page 6. It is believed this is an excellent improvement over the present method of opening a tower door.

E. S. MASSIE, JR.
Editor

SPEED INDICATOR

The tipping over of trucks on curves due to excessive speed represents one of the major causes of serious and fatal CCC vehicle accidents. Governors and educational campaigns as to safe driving practices are of value in reducing this type of accident but there are frequent occasions when speeds of 20 to 25 m.p.h. would be dangerous on certain curves. In addition, CCC boys, like many grownups, frequently forget previous experiences or lessons in proper driving habits.

At the request of the CCC Safety Division, the Washington Engineering Office developed a cheap and fairly effective device for attaching to stake trucks that will indicate when a predetermined speed on curves has been exceeded.

The device operates on the inertia principle and is illustrated in Figures 1 to 4. The complete device is mounted preferably in the front center of the stake body directly behind the cab. The cover, B, is securely fastened to the front rack by wood screws or other suitable means. When rounding a curve at excessive speed, the pendulum, G, is forced to swing either to the right or left, as indicated by the dotted lines in Figure 2.

If the swing is sufficient, the arm, I, drops the shutter, P, Figure 4, so as to show a red disc through glass, O. (See figure 3). The device cannot be reset unless the box is opened and the shutter returned to its upper position resting on arm, I. The hasp, C, and D., provides a means to lock the box by the use of a padlock or seal.

The magnet, L, together with armature, K, provides a frictionless drag on the action of the pendulum so that a truck may be operated on normal Forest truck trail side slopes or banks without throwing the device into operation. This drag can be adjusted by raising or lowering the magnet, L, in clamp M. The gear train, E and Q, was obtained from an old water meter and serves to dampen out any tendency for the pendulum to oscillate back and forth when the truck negotiates excessively rough roads.

The gear, Q, revolves approximately 60 times to every revolution of gear E. The energy required to speed up the gear Q first in one direction and then in the other (as would occur if the pendulum G attempted to swing back and forth) is of sufficient magnitude to dampen out any oscillations of the pendulum from the above-named cause.

As indicated the entire device has been cheaply constructed but from the tests conducted the readings obtained have been accurate in the largest majority of cases.

Further information if desired can be obtained from the Washington Office of Engineering.

Fig. 1.

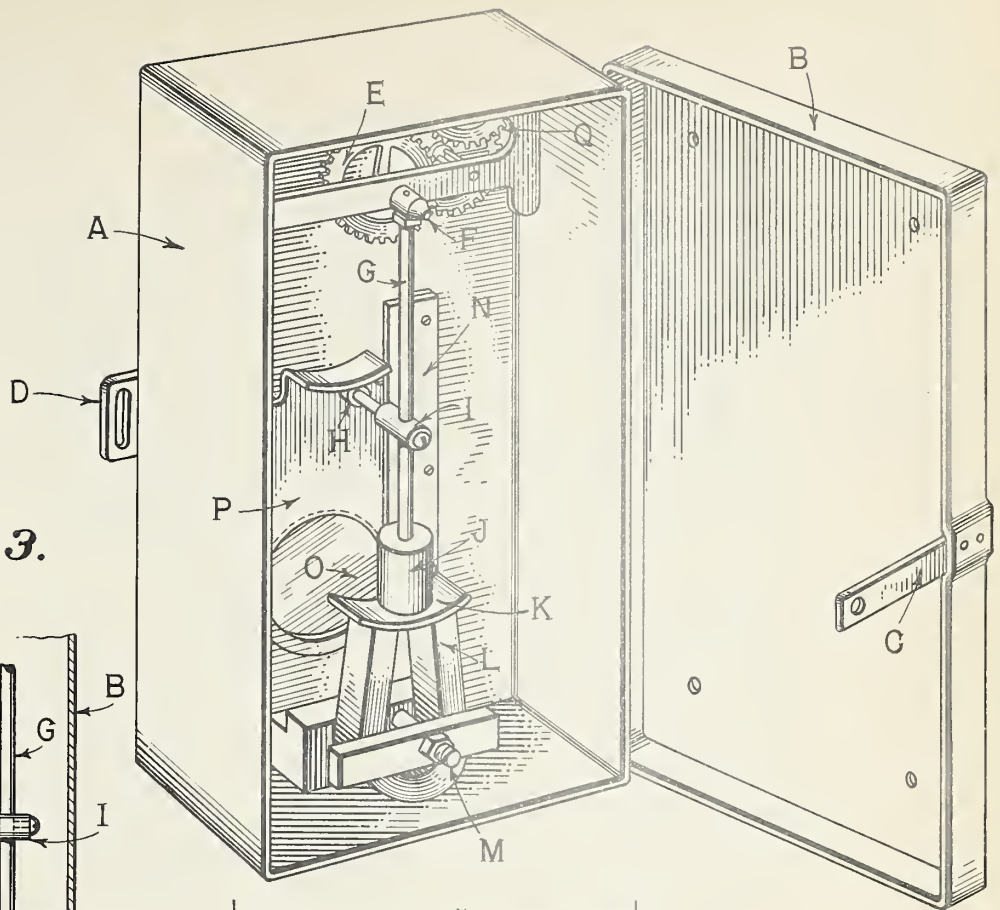


Fig. 3.

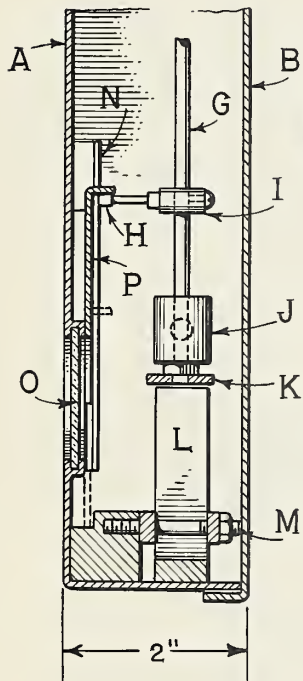


Fig. 4.

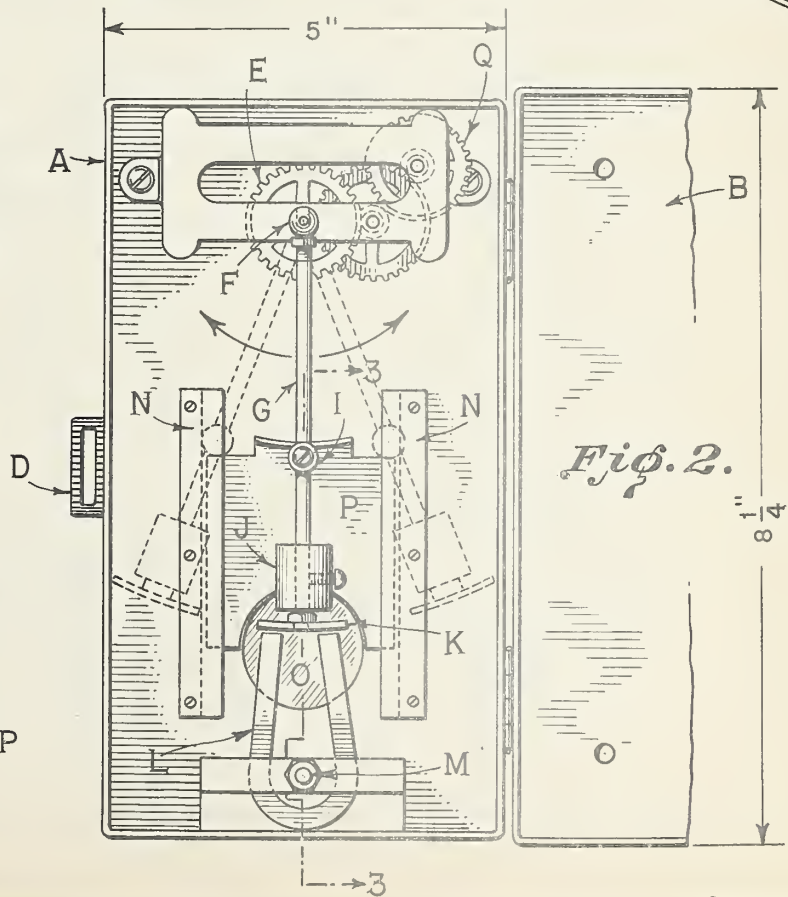
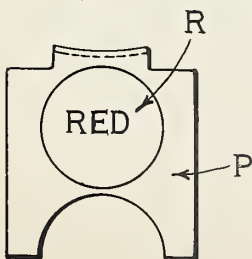
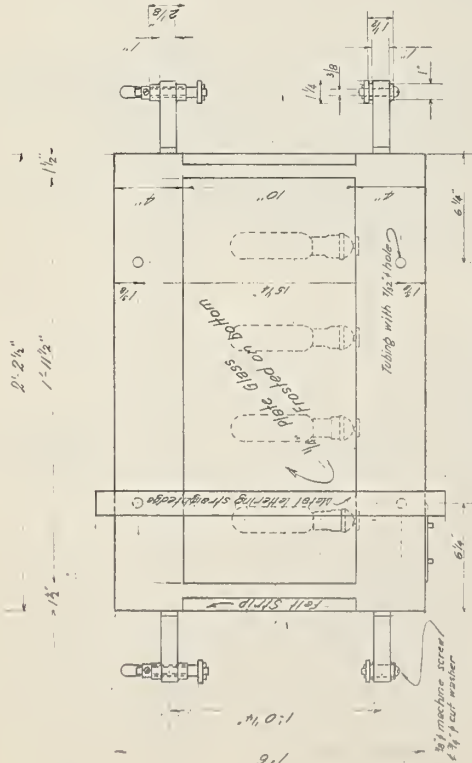


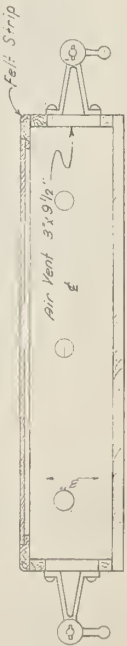
Fig. 2.



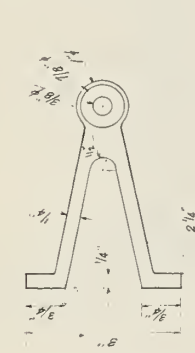
PLAN OF LIGHT TABLE
Scale 1/4" = 1"



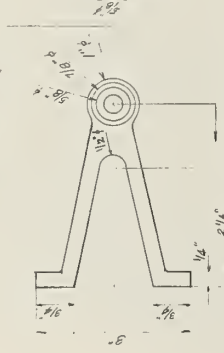
SIDE VIEW
Scale 1/4" = 1"



SECTION THRU CENTER
Scale 1/4" = 1"



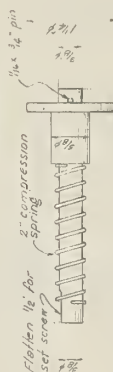
BRACKET FOR SPINDLE
Scale 3/4" = 1"



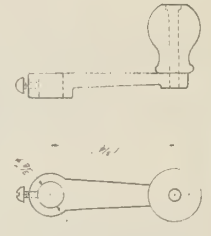
BRACKET FOR CRANK SPINDLE
Scale 3/4" = 1"



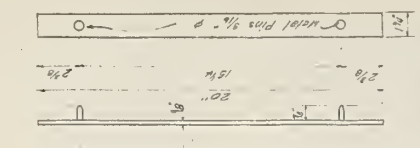
SPINDLE
Full Scale



CRANK SPINDLE
Full Scale



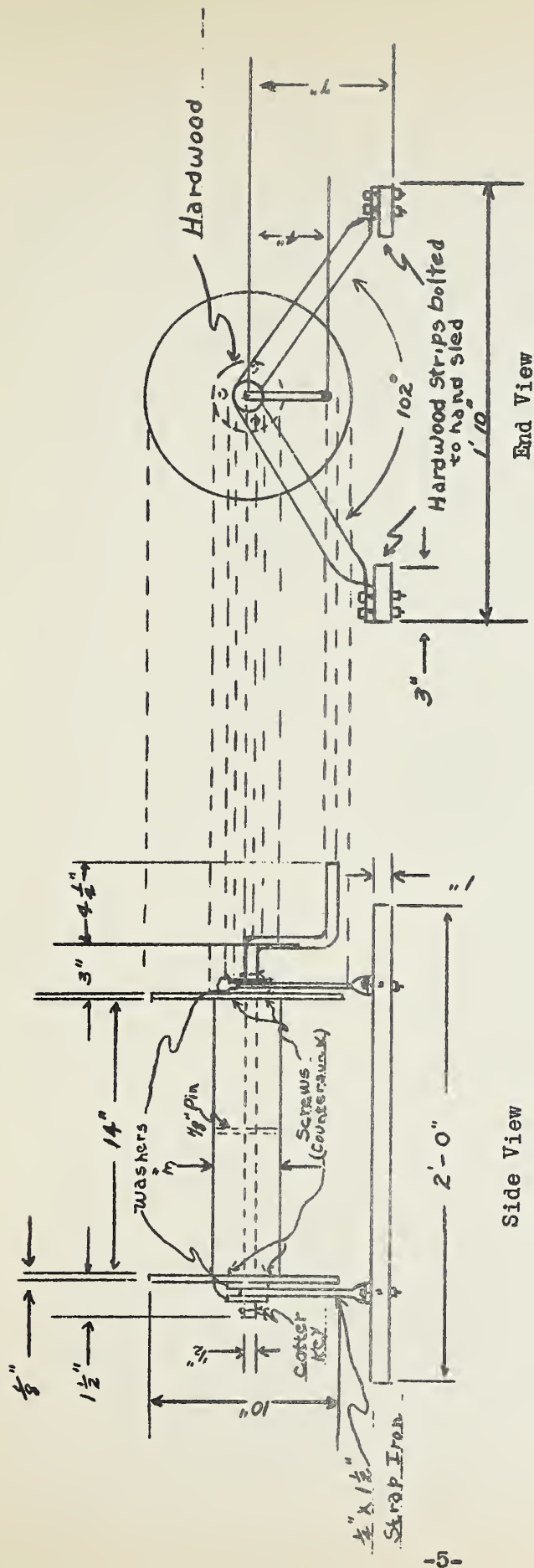
CRANK
Full Scale



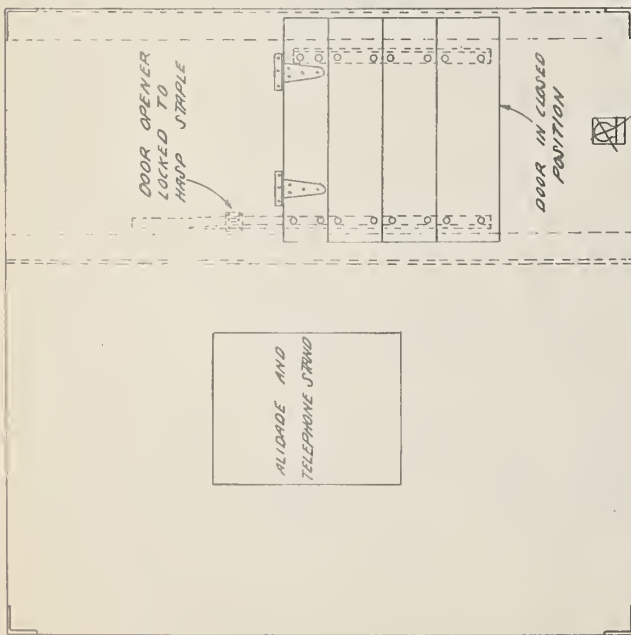
STRAIGHT EDGE
Scale 1/4" = 1"

U. S. DEPARTMENT OF AGRICULTURE	
FOREST SERVICE	
REGION 2	REGIONAL ENGINEER
JAMES L. BROWNLEE	
FILM LIGHT TABLE	
for Examination and Numbering of Aerial Film.	
DESIGNED J.E.K.	DRAWN W.R.P.
SCALE AS SHOWN	CHECKED
APPROVED J.E.K.	DATE 4-4-40

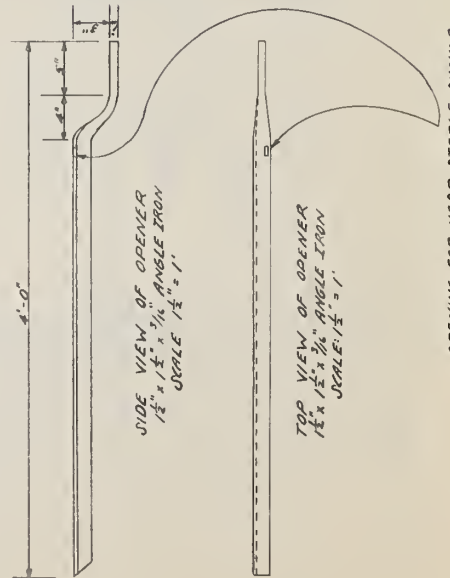
114-01



MICHIGAN STATE CCC
 CAMP PARADISE 127-S
 Eckerman, Michigan
 Hand Reel for winding rope
 or, cable
 Lake depth Surveys
 Scale: $1\frac{1}{2}" = 1'$
 Suggested by: I.R. Farrel
 Designed by: C.F. Guenther
 Drawn by: C.F. Guenther



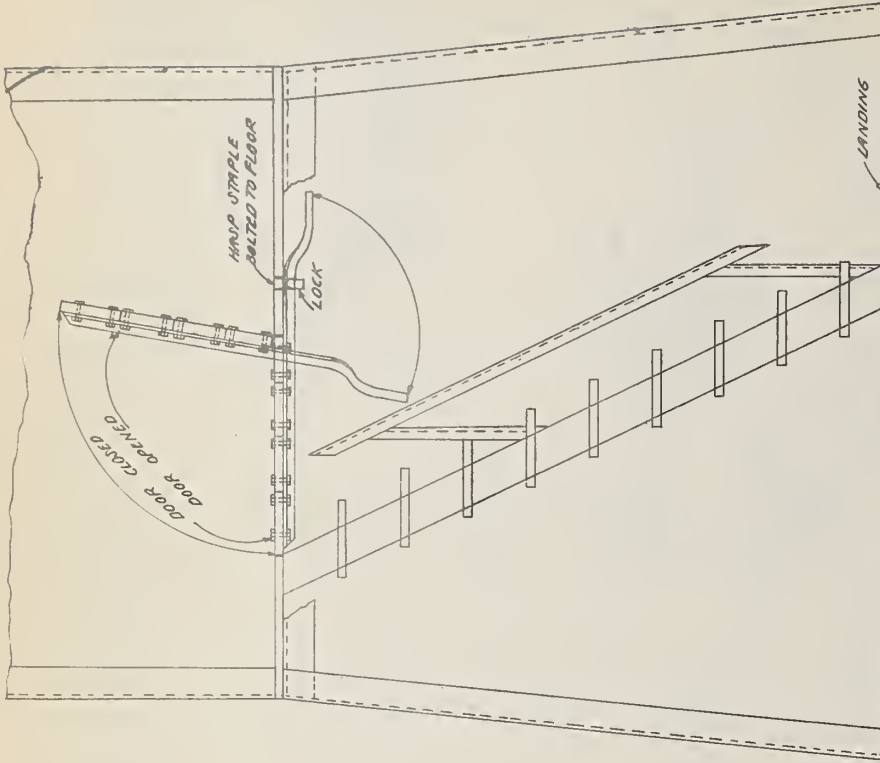
FLOOR PLAN
SCALE 1" = 1'



SIDE VIEW OF OPENER
1/2" x 1 1/2" x 1/4" ANGLE IRON
SCALE 1 1/2" = 1'

TOP VIEW OF OPENER
1 1/2" x 1 1/2" x 1/4" ANGLE IRON
SCALE 1 1/2" = 1'

OPENING FOR HAND STAPLE SHOULD
BE NEAR EDGE OF ANGLE ALLOWING
ROOM FOR LOCK UNDERNEATH



SIDE VIEW
SCALE 1" = 1'

- BILL OF MATERIAL
- 77T-1 1/2" x 1 1/2" x 1/4" ANGLE IRON
 - 1 - 1 1/2" x 1 1/2" x 1/4" HAND STAPLE
 - 4 - 2" x 1/2" FLAT HEAD STOVE BOLTS
 - 16 - 2" x 1/2" SQUARE HEAD BOLTS
 - 16 - 1/2" WASHERS LOCK

NOTE:
ALL BOLTS COUNTER SUNK IN FLOOR

HANDLE & LOCK
FOR OPENING TOWER DOOR
DESIGNED & CONSTRUCTED BY T.E. MATHESON, TOWERS GUARD
REMER RANGER DISTRICT
CHIPPENAW NATIONAL FOREST
SCALE: UNKNOWN